Telephony

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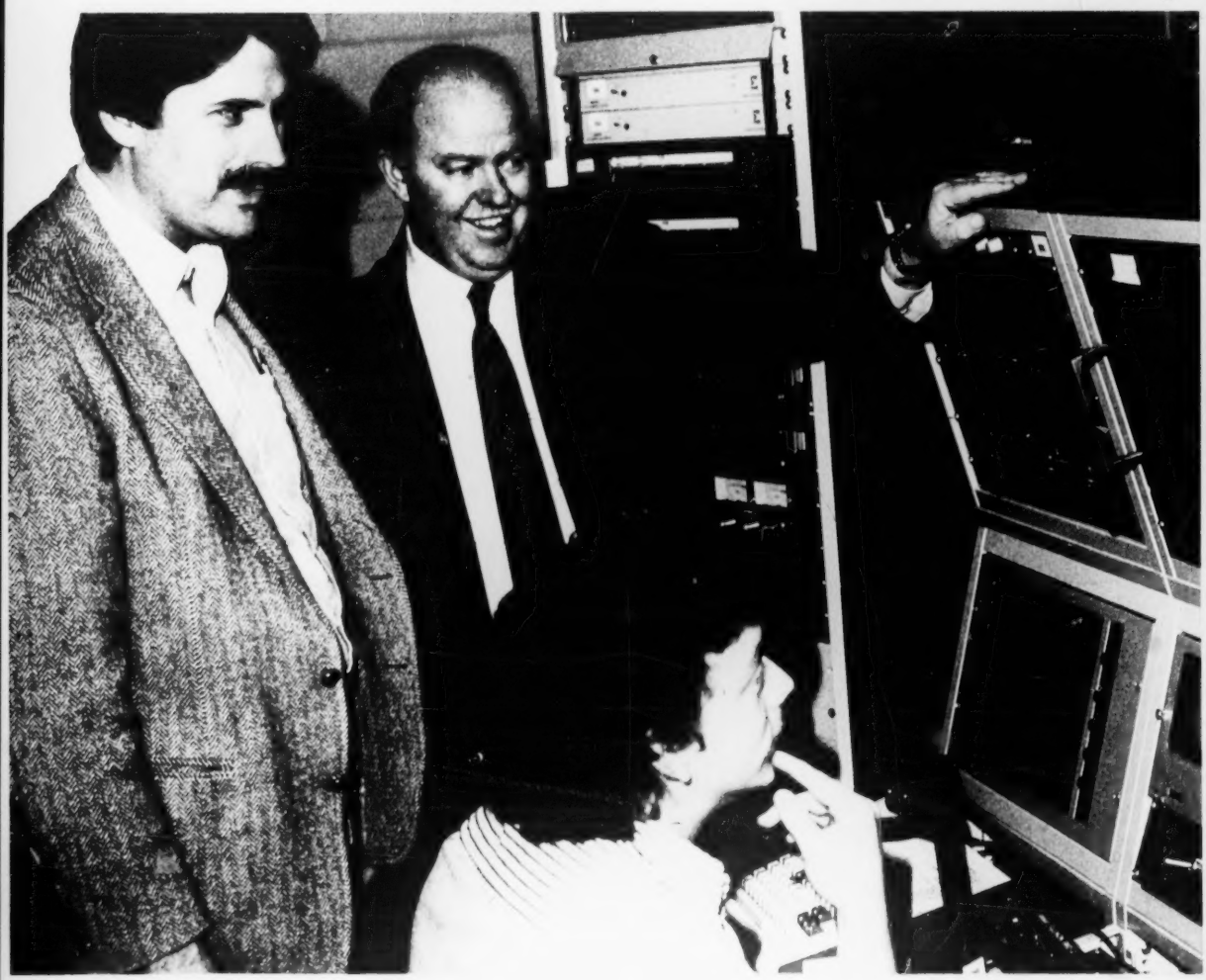

VIDEO DS3 FIBER GETS SMART
New England Tel helps the University of Maine bring education to the people

1-900-GROWS-UP
Calling service matures into legitimate business tool

AT&T ACQUIRES WU's EASYLINK
AT&T spends $180M for electronic messaging units

MONDAY, JULY 9, 1990 Volume 218, No. 2

Telephony

INTEGRATING VOICE & DATA COMMUNICATIONS

The University of Maine linked forces with New England Telephone to provide education statewide. Pictured here in the master control room for the interactive television system are (l to r) George Connick, president of the University of Maine at Augusta; Fred Hurst, director of interactive television; and Bob Reichenbach, TV master control switcher. Cover photo by Kathy Moore

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1-900-GROWS-UP
Maturing industry hits new markets

Richard Karpinski, Assistant Editor

This may be the year the 900 industry begins to outgrow dial-a-porn, gab lines and celebrity update services and becomes a legitimate marketing, advertising and customer service tool for the corporate world.

By most accounts, the maturation of the industry will not happen by itself. Unlike the initial boom of the 900 market, which saw carriers sit back and watch the programs—and the profits—roll in, this next phase will require the carriers to move beyond acting as a mere pipeline.

And four long-distance carriers—AT&T, MCI Communications Corp., US Sprint and Telesphere Communications Inc.—have been responding quickly to improve and expand service to ride this latest 900 trend.

"We're going into the second generation of 900 services," said Pat Mindrup, director of marketing for Sprint Gateways, US Sprint's 900 services unit. "Corporations need to keep an open mind, because many, many success stories are being made right now. It's where a significant part of the 900 industry will be going in the future."

"We've seen more and more big name companies jumping on the 900 bandwagon," said Kevin Raftery, product marketing manager for AT&T MultiQuest. Although 900 has been primarily an entertainment medium thus far, business applications have experienced "geometric-type growth" in the last year and may eventually catch up with entertainment programs in terms of revenue, Raftery said.

Although it is still young, the 900 industry is already a big moneymaker, and according to experts it is ready to start booming again. The national 900 market was estimated by Link Resources at $235 million in 1989 and is projected to grow to $1.2 billion by 1994. And that may be a conservative outlook; other analysts have projected growth of up to $2 billion by 1992. The carrier take on that market is about 25%, according to most estimates.

Yet the market remains largely an entertainment medium. According to a Link Resources industry study, at present only about 4% of all 900 call minutes are devoted to corporate uses.

So why all the fuss about courting corporate users? The key, carriers say, is new business. Although some experts predict that increases in 900 business applications will drain revenues from existing 800 services and entertainment programs, most carriers say this isn't true.

"What we've seen is not a movement away from entertainment, but rather a greater percentage of programs have become business-to-consumer oriented. We feel this is the area that's really going to be taking off in the future," AT&T's Raftery said. "The growth in 900 will be new business."

Corporate use of 900 numbers is a big market that needs to be tapped, said Jim Hertel, vice president of marketing for Telesphere 900. "We're trying to make our business grow. With hard work, we will see an opportunity for our usage minutes to grow, and business applications can help it grow in a positive way."

Beyond the obvious profit motive, there is much to attract corporate users to 900 services. Specifically, all four of the major 900 carriers have added innovations to their 900 lines that appeal directly to more sophisticated business clients.

AT&T, which invented 900 services more than a decade ago with Dial It 900, a barge-in broadcast service that let callers listen in on live events or hear prerecorded messages, has just begun to pitch 900 service as a business tool.

Last year, the carrier introduced the fully interactive MultiQuest 900 service. Its InfoWorx feature lets service providers set up service bureaus within the central office. This way, providers can work directly with AT&T to develop programs.

Finally, the company has set down stringent guidelines to lure back customers put off by the 900 industry's reputation as a purveyor of pornography and for price-gouging on calling services marketed at children.

"[The guidelines] have really helped us clean up the image of 900," said AT&T's Raftery. "The only way business-type applications will take off is if everybody places tighter controls over what types of programs they will and will not provide."

AT&T's efforts have begun to pan out, and the company has attracted corporate customers such as Charles A. Schwab and Amtrak, both of which use InfoWorx to take customer phone orders, as well as Lotus and Pratt & Whitney, which use their 900 numbers as customer service hot lines. So far, reports from these users have been positive.

"While no one likes to pay for something they have been getting for free,

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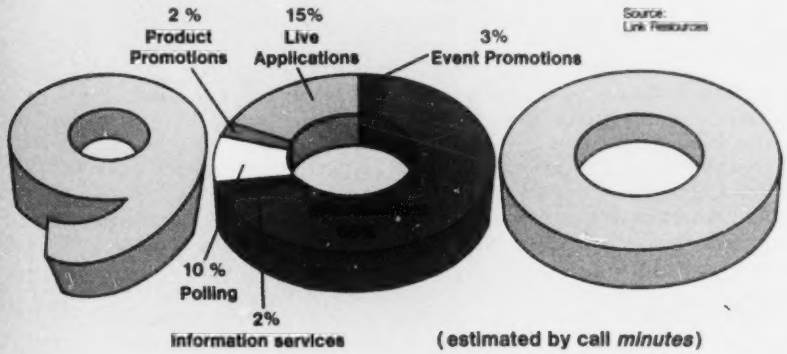
NATIONAL 900 MARKET BY APPLICATION TYPE



(estimated by call *minutes*)

AT&T acquires WU's EasyLink

Richard Karpinski
Assistant Editor

In a move that expands its already substantial electronic messaging offerings, AT&T acquired Western Union's EasyLink electronic mail, telex and packet-

er," US Sprint said in comments submitted to the FCC Tuesday. But Sprint said that AT&T's market share is "more than double the industry-wide level considered by the Department of Justice to indicate a 'highly concentrated' market."

AT&T currently is classified by the FCC as a "dominant carrier." As such, it is the only long-distance company on which the agency imposes various regulations, including the requirement for filing tariffs. AT&T repeatedly has argued that it is playing in a competitive market and that the FCC rules place it at a serious disadvantage. In the inquiry launched earlier this year, the FCC reached a "tentative" conclusion that some of the regulations should be lifted where AT&T appears to face competition, primarily in the large business market.

But while other long-distance companies criticized the finding, AT&T said that the agency stopped short.

"While business customers are clearly penalized by today's unequal regulation, we think it's an error to focus on that market alone," said Bill Cartucci, AT&T's vice president for regulatory affairs. Cartucci said that AT&T wants other "unneeded regulation" lifted, as well.

AT&T's competitors and others, however, told the FCC that any radical change in regulation will only seriously damage competition, not foster it.

Noting that there are many divergent views on the issue among AT&T's competitors and consumers, there is, nonetheless, "no disagreement on the fundamental question of deregulation," said James M. Smith, president of the Competitive Telecommunications Association. Smith told a Washington press conference Tuesday that with a 70% market share and "enormous profits," AT&T is more than five times bigger than its largest competitor, MCI, even after that company's recent acquisition of Telecom*USA.

CompTel's filing with the FCC called for the agency to take several steps before it proceeds with further deregulation. Specifically, CompTel wants the agency to eliminate "substantial remaining barriers to true competition, especially in the areas of local access cost structures and network interconnections" that it says unduly benefit AT&T.

The Consumer Federation of America said that the FCC should be trying to make price caps work before proceeding further. Gene Kimmelman said that AT&T's cut back on its evening/night discount calling periods last December is but one example of how caps are failing consumers. He also cited the company's "failure" to pass through "all" of the savings from the local exchange carriers' access rate reductions that went into effect this month as another example that caps are not benefiting consumers.

In addition to the opposition expressed last week, there also is support among some lawmakers for hearings on the FCC's apparent move to further deregulate AT&T, just one year after price caps were put into place. Rep. Tom Tauke, R-Iowa, for example, has called for hearings. T

'Nobody does it better,' boasts cellular industry

Michael Warr
Technical Editor

There is nothing personal communications networks can do that cellular can't do better, John Stanton, vice chairman of McCaw Cellular Communications Inc., told PCN proponents at the first Worldwide Personal Communications Com-Forum held June 27-28 in Dallas.

Cellular's chief advantage is that it has proven itself, Stanton said. PCN is an experimental technology that cannot yet handle vehicle handoffs.

"PCN and CT2 are nothing more than variations on a theme," he said.

McCaw, now strongly established in cellular, will be "defending its turf," against new technologies, Stanton stated. He predicted that by 1997 cellular service will have blanketed the United States while PCNs will have only been built in scattered locations.

Those interested in the mobile market should abandon the PCN concept and focus on market niches such as rural fixed service, rural mobile service and wireless, in-building PBXs, he said.

Stanton backed up his claims with Europe's cellular experience. The Scandinavian countries, for instance, have reached a 5% annual rate of penetration, and he expects a comparable growth curve in the United States.

This projection was supported by a U.S. cellular market report by Bell Atlantic Mobile Systems Inc.

The number of U.S. cellular systems on-line grew from 87 to 588 between 1985 and 1989, according to Bell Atlantic. After 1987, demographics began to change. For example, in the past three years the number of cellular users who make less than $30,000 a year has been growing faster than the number of users who make more than $75,000.

"Lower-priced portable and transportable phones are . . . attracting the consumer market," said A. Robert Handell, vice president-marketing and sales for Bell Atlantic Mobile. "They offer instant cellular gratification."

McCaw's Stanton also warned would-be PCN providers that they face some heavy-hitters in the regulatory arena. Right now, he said, PCN spectrum is in the hands of petroleum companies, railroads, telcos, interexchange carriers,

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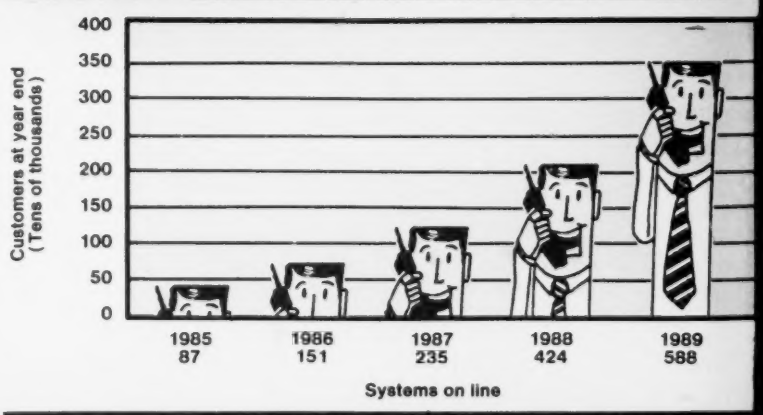
CELLULAR INDUSTRY
Customer growth: 1985-1989



CATV operators and broadcasters, all of which have no need for PCN, according to Stanton.

Though Stanton led the cellular offensive at the forum, others were less optimistic about U.S. PCN deployment.

Martin Cooper, chairman and chief executive of Dyna Inc., considers PCN an inevitable technology of the future, but he is convinced that it will take a lot longer than seven years for PCN to carve a significant share of the U.S. market, and even longer to supplant cellular.

"In 20 years cellular will dominate telecommunications. McCaw doesn't have to worry about PCN and CT2 undermining its market," Cooper said. "Instead, the cellular industry should promote CT2 since it will raise awareness of cellular."

John Carrington, managing director of Mercury Personal Communications and one of PCN's strongest supporters, was a scheduled speaker but missed the conference because of illness. Carrington predicted in a paper published at the forum that by the year 2000 there will be 13 million pocket telephones in use in the United Kingdom—making them as common as credit cards. T

KDD reorganizes as income lags

Michael Galbraith, Special Correspondent

Kokusai Denshin Denwa Co. Ltd. has restructured its organization to improve service and efficiency as well as to defend its market share from Japan's two new international carriers.

The changes come only weeks after KDD announced a sharp drop in income for the fiscal year ending March 31, 1990, and an even more gloomy forecast for 1991. In fiscal 1990, net income was down 24.7% to Y29 billion ($190.5 million) on revenues that grew only 0.1% to Y259 billion. Further, for the present fiscal year, KDD expects revenues to fall 10% and net income to drop 50%.

According to industry sources, KDD's financial woes can be traced to International Telecom Japan Inc. and International Digital Communication Inc., two recent entrants to Japan's international carrier market that have siphoned off about 35% of the business on the key U.S. route, nearly 30% on the U.K. and Hong Kong routes, and about 23% of the total market on all the routes.

In KDD's reorganization, sales and marketing operations will be strengthened with the addition of 50 staffers, and two new sales operations will be created in the Tokyo area.

KDD President Takazo Ishii told a press conference that "restructuring is necessary to fortify the company to fight the competition." Regarding the content of the plan, he said that the reorganization "is mainly to strengthen the sales front and develop new business." KDD underwent organizational shake-ups in March 1988 and in January 1989, but this time the impact is expected to be much greater.

Other changes include the establishment of a new group tentatively called Business Development Headquarters; the downsizing of administrative affairs departments; the transfer of some businesses to affiliated companies; and the merger and consolidation of KDD Meguro R&D Laboratories and KDD Kamifukuoka R&D Laboratories.

In all, approximately 400 KDD employees will be transferred to avoid layoffs. KDD currently has 5800 employees with an additional 600 working in affiliated companies.

BellSouth, DEC ink marketing deal

Thomas Lanning, Assistant Editor

BellSouth and Digital Equipment Corp. have set up a cooperative marketing program that lets BellSouth offer customers a single point of contact for a complete range of voice and data services.

"We're enhancing DEC's VAX computer systems by integrating them with our voice solutions, which can be either central office-based or PBX-based," said Phyllis Blalock, product manager at BellSouth Services.

The marketing focus will be on end users with large customer service applications, she said.

BellSouth has been a reseller of DEC products for five years, but the present focus will be on computer integrated telephony and interactive voice response systems, Blalock said.

This is the first such agreement that DEC has established with any Bell regional holding company, said Steve Allen, DEC's product marketing manager for local area networks.

The company's range of products that can be marketed as part of the program includes data communications hardware and software, he said.

The total program, DEC said, will provide customers with access to network design, implementation, operational support, equipment installation, maintenance and remedial services. T

AT&T to upgrade SW Bell cellular

Steven Titch
News Editor

AT&T Network Systems has signed a multimillion dollar contract with Southwestern Bell Mobile Systems to build digital cellular systems in four markets.

Under the terms of the agreement, AT&T Network Systems will supply Autoplex Systems for cellular operations in Kansas City, Mo., Wichita, Kan., Boston and Washington.

In Kansas City and Wichita, where Southwestern Bell owns the wireline franchise, AT&T Autoplex systems replace Motorola cellular equipment. In Boston and Washington, where Southwestern Bell owns Cellular One, the non-wireline franchise, the company will overlay AT&T gear on the existing Motorola network.

"Cellular demand has brought us to the point where we need to make substantial additions," said a Southwestern Bell spokesman. Southwestern Bell will deploy a 23-cell Autoplex system in Kansas City and a five-cell system in Wichita, he said.

In Boston and Washington, Autoplex systems will be used expand the capacity of the current cellular system, the spokesman said, adding that there are no plans for a complete changeout.

With this contract, AT&T is using the overlay scheme in the United States for the first time, according to Tom Powers, president of AT&T Cellular Systems, a unit of AT&T Network Systems, although he said the company did overlay an Autoplex system on a cellular network in Seoul, Korea last year.

"It's more typical to see a changeout," he said.

The Autoplex network will operate alongside the Motorola system, Powers said, using the same cell sites and anten-

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nas. "AT&T is working in the same area and territory," he said.

Subscriber calls can be handled by either system, but the systems can not hand off calls to each other, Powers added.

AT&T is currently working with Southwestern Bell on the design and engineering of the new systems. Construction is scheduled to begin later this year. T

Ford offers factory-installed cellular phones

Ford Motor Co.'s Electronics Division has set up a national network to offer car buyers factory-installed cellular telephones as well as immediate service at the point of purchase.

The Ford Cellular System provides new car buyers with a phone, a number and on-line service from the moment they drive off the lot. The factory-installed phone is an option on 1990 Lincoln Town Car, Continental and Mark VII models.

As part of the arrangement, Ford has signed agreements with nine companies that own cellular operations throughout the country.

The providers are American Cellular Communications, Ameritech Mobile Communications, Bell Atlantic Mobile Systems, BellSouth Mobility, GTE Mobilnet Service, Nynex Mobile Communications, Southern New England Telephone's SNET Mobilecom, United States Cellular Corp. and U S West Cellular.

Ford "hand-picked" each provider after visiting the cities and trying out the service, a Ford spokeswoman said.

Although car dealers have been involved in the sale of cellular services for several years, car manufacturers only now are beginning to offer factory-installed models.

Analysts attribute the delay to the long lead-time it takes for cars to get through the research and development process. Though it has taken some time initially, car companies most likely will accelerate their participation in cellular. Factory installation lets car companies avoid the problem of electronic interference that cellular phones sometimes cause, especially in cars with a high number of microelectronic components, said Herschel Shosteck, a cellular market analyst with Herschel Shosteck Associates. T

Maturing Industry *continued*

most people understand that free technical support does not go on forever," said Richard Burkhart, Pratt & Whitney president and chief executive officer.

MCI and US Sprint, which battle with AT&T for long-distance users, are also hunting for 900 clients. Both carriers offer interactive capabilities and advanced features and have experienced rapid growth in revenue and usage minutes. Both have had some early, limited success attracting corporate users.

Earlier this year, Sprint Gateways introduced a 900 marketing tool designed to help the carrier attract large corporate customers who are unwilling to take the 900 plunge without some assurance that they will reach their market.

The service, Targetlist, matches the 900 caller's number, captured with automatic number identification (ANI), with names, addresses and demographic information in the Donnelley Marketing database, the largest consumer household database in the country. Sprint Gateways then sells these lists back to 900 service providers, or to any other business looking for demographic information.

Telesphere is also selling ANI-generated lists. The carrier offers Prizm 900 and Directory 900, both of which use a database dip to retrieve information about 900 callers.

While not as well known as "The Big Three," Telesphere has been something of a trailblazer in the 900 field. Its efforts have paid off; the carrier currently carries about 1500 programs, which the company claims make it the biggest 900 service operator in the industry. Telesphere's success is typical of the still-infant 900 industry and shows that with hard work and innovation, 900 services can pay off for carriers in a big way. T

Direct line to the American dream

Entertainment is, and probably always will be, the king of 900 numbers.

Successful 900 numbers in the past have allowed callers to stay in step with The New Kids on the Block, get the latest diamond wisdom from baseball star Jose Canseco and catch up with the devilish deeds of their favorite soap opera villains. If you're into *glasnost*, just last week a California marketing consultant inaugurated a 900 line that will keep you up-to-date on Mikhail Gorbachev.

These passive 900 numbers have helped sculpt a new image of the laid-back couch potato: Instead of gripping a television remote controller, they hold telephones in hand.

But the addition of interactive capabilities to 900 services may help change that passive reputation. Move over Pat and Vanna, the 900 interactive game show is here.

One of the first and most successful examples of 900 interactive games is "The Game," a 900 number offered by 900 Million Productions, a Los Angeles-based company. Callers pay $2.99 per call to compete against up to eight other contestants by keying in numerical answers to trivia questions using dual-tone multifrequency phones. Winners are given an 800 number and allowed to compete for free in subsequent rounds. "The Game" promises to pay out a $1-million grand prize to contestants who win seven consecutive rounds.

And that's just the beginning of the entertainment capabilities of interactive 900 service, according to Stephen Reynolds, Link Resource's senior analyst-voice services. Reynolds sees 900 service as a bridge to the multimedia information lifestyle of the future. One emerging application is interactive television, which would let viewers call a 900 number to choose camera angles for sporting events and interact with other television shows.

Until that time, however, the 900 telephone game will have to suffice. A slew of interactive telephone games launched of late include games based on television staples such as Family Feud, Jeopardy and Wheel of Fortune. None of these 900 numbers sell, promote or offer information. They are games, plain and simple, and big cash prizes are the draw.

"Only in America is it possible to win $1 million from the privacy of your own home," said Lynn Folse, vice president of 900 Million Productions. "For the first time, people can use their phones for a direct line to the American dream."